

CLAIMS:

1. A menu generator device (1) for complementing video/audio signals (VA) with menu information (MI), which video/audio signals (VA) may possibly be divided into a plurality of sequences, comprising:
- 5 read-in means (2) for reading in the video/audio signals (VA),
analyzing means (3) for generating video/audio identifying information (VA-ID) from the video/audio signals (VA) read in,
communications means (4) for transmitting the video/audio identifying information (VA-ID) to a remote menu data server (20) and for receiving, from the menu data server, menu data (MD) assignable to the video/audio identifying information
10 transmitted (VA-ID), and
menu generator means (5) for generating menu information (MI) from the menu data (MD) and for emitting the menu information (MI) for connection with the video/audio signals (VA).
- 15 2. A menu generator device as claimed in claim 1, characterized in that the menu generator means (5) are arranged to generate parts of the menu information (MI), which parts of the menu information (MI) are assigned to respective sequences in the video/audio signals (VA), and
in that the menu generator means (5) are arranged to emit the parts of the
20 menu information (MI) for connection with the sequences in the video/audio signals (VA).
3. A menu generator device as claimed in claim 2, characterized in that the menu generator means (5) are arranged to generate parts of the menu information, which parts of the menu information contain time information on the relative or absolute starting times of
25 the sequences within the video/audio signals (VA).
4. A menu generator device as claimed in claim 3, characterized in that the menu generator means (5) are arranged to re-calculate the time information as a function of sections

extraneous to the content of interest that are contained in the video/audio signals (VA), e.g. commercials.

5. A menu generator device as claimed in claim 1, characterized in that the
5 analyzing means (3) are arranged to extract textual information from the video/audio signals (VA) read in, as the video/audio identifying information (VA-ID).

6. A menu generator device as claimed in claim 1, characterized in that the
10 analyzing means (3) are arranged to extract audio information from the video/audio signals (VA) read in, as the video/audio identifying information (VA-ID).

7. A menu generator device as claimed in claim 1, characterized in that the
15 analyzing means (3) are arranged to extract video information comprising a single picture or a plurality of successive pictures from the video/audio signals (VA) read in, as the video/audio identifying information (VA-ID).

8. A menu generator device as claimed in claim 1, characterized in that the
20 analyzing means (3) are arranged to extract textual information comprising a broadcaster code and/or a time of transmission and/or a date of transmission, etc. from metadata connected with the video/audio signals (VA) read in, as the video/audio identifying information (VA-ID).

9. A menu generator device as claimed in claim 1, characterized in that the menu
25 generator means (5) have connected upstream of them menu data selecting means (6) that are arranged to allow the user-controlled selection of menu data (MD), from a plurality of sets of such data, for the generation of the menu information (MI).

10. A menu generating method for complementing video/audio signals (VA) with
30 menu information (MI), which video/audio signals (VA) may possibly be divided into a plurality of sequences, comprising:

reading in the video/audio signals (VA),
analyzing the video/audio signals (VA) and generating video/audio identifying
information (VA-ID) from the video/audio signals (VA) read in,
transmitting the video/audio identifying information (VA-ID) to a remote

menu data server (20) and receiving, from the menu data server (20), menu data (MD) assignable to the video/audio identifying information (VA-ID) transmitted,
generating menu information (MI) from the menu data (MD) and emitting the menu information (MI) for connection with the video/audio signals (VA).

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11. A menu generating method as claimed in claim 10, characterized in that parts of the menu information (MI) are generated, which parts of the menu information are assigned to respective sequences in the video/audio signals (VA), and in that the parts of the menu information (MI) are emitted for connection with the sequences
10 in the video/audio signals (VA).

12. A menu generating method as claimed in claim 11, characterized in that parts of the menu information are generated, which parts of the menu information contain time information on the relative or absolute starting times of the sequences within the video/audio
15 signals (VA).

13. A menu generating method as claimed in claim 12, characterized in that the time information is re-calculated as a function of sections extraneous to the content of interest that are contained in the video/audio signals, e.g. commercials.
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14. A menu generating method as claimed in claim 10, characterized in that the video/audio identifying information (VA-ID) is generated by extracting textual information from the video/audio signals (VA) read in.

25 15. A menu generating method as claimed in claim 10, characterized in that the video/audio identifying information (VA-ID) is generated by extracting audio information from the video/audio signals (VA) read in.

16. A menu generating method as claimed in claim 10, characterized in that the
30 video/audio identifying information (VA-ID) is generated by extracting video information comprising a single picture or a plurality of successive pictures from the video/audio signals (VA) read in.

17. A menu generating method as claimed in claim 10, characterized in that the video/audio identifying information (VA-ID) is generated by extracting textual information comprising a broadcaster code and/or a time of transmission and/or a date of transmission, etc. from metadata connected with the video/audio signals (VA) read in.

18. A menu generating method as claimed in claim 10, characterized in that menu data (MD) that is determined for the generation of the menu information (MI) is selected from a plurality of sets of such menu data (MD) under user control with the help of menu data selecting means (6) connected upstream of the menu generator means (5).

19. A method of operating a menu data server (20) for supplying menu data (MD) when requested by a menu generator device (1), comprising:

receiving from the menu generator device (1) a request that contains video/audio identifying information (VA-ID), the video/audio identifying information (VA-ID) having been generated by the menu generator device (1) by analyzing video/audio signals (VA) read in at the menu generator device (1),

determining, from a menu data database that communicates with the menu data server and contains menu data (MD) and video/audio identifying information connected therewith, a menu data entry corresponding to the video/audio identifying information (VA-ID) received, the determination being performed by comparing the video/audio identifying information (VA-ID) received with the video/audio identifying information stored in the database, and

transmitting the menu data (MD) determined to the menu generator device (1) making the request.

20. A method as claimed in claim 19, characterized in that the determination of the menu data (MD) comprises comparing textual information forming the received video/audio identifying information (VA-ID), which textual information was extracted from the video/audio signals (VA) at the menu generator device (1), with textual information that is stored on the database and forms the stored video/audio identifying information.

21. A method as claimed in claim 19, characterized in that the determination of the menu data (MD) comprises comparing audio information forming the received video/audio identifying information (VA-ID), which audio information was extracted from

the video/audio signals (VA) at the menu generator device (1), with audio information that is stored on the database and forms the stored video/audio identifying information.

22. A method as claimed in claim 19, characterized in that the determination of the menu data (MD) comprises comparing video information that comprises a single picture or a plurality of successive pictures and that forms the received video/audio identifying information (VA-ID), which video information was extracted from the video/audio signals (VA) at the menu generator device (1), with video information that is stored on the database and forms the stored video/audio identifying information.

23. A method as claimed in claim 19, characterized in that the determination of the menu data (MD) comprises comparing textual information that contains a broadcaster code and/or a time of transmission and/or a date of transmission, etc. and that forms the received video/audio identifying information (VA-ID), which textual information was extracted at the menu generator device (1) from metadata supplementing a video/audio signal (VA) read in with the help of the menu generator device (1), with textual information that is stored on the database and forms the stored video/audio identifying information.

24. A method as claimed in claim 19, characterized in that the determination and emission of menu data (MD) to the menu generator device (1) is controlled by reference to user identifiers (PID's) that are received as part of the request from the menu generator device (1) and/or by reference to subscriber lists available from the menu data server.

25. A device that is arranged to process a video/audio signal (VA), having a menu generator device (1) as claimed in any of claims 1 to 9.